

Patricia A. Stewart et al.
USSN 10/642,709
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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

In The Claims:

1. (Currently Amended) In an oxidation inhibiting lubricant composition, suitable for use in the manufacture of aluminum alloys, containing lubricant base selected from the group consisting of solid lubricants, liquid lubricants, grease lubricants, emulsion lubricants, and dispersion lubricants, the improvement wherein said lubricant composition further contains: from 0.1% to 10% by weight ~~an effective amount~~ of an organic ~~fluorine-containing passivating~~ compound selected from the group consisting of: tetradecafluorohexane, polyhexafluoropropylene oxide, fluorinated ethylene propylene copolymer, perfluoroalkoxy polymers, and poly(ethylene-co-tetrafluoroethylene); ~~and polytetrafluoroethylene~~.
2. (Canceled)
3. (Currently Amended) The lubricant composition of claim 1 containing ~~about 1% to about 8% by weight of said fluorine-containing passivating~~ organic compound.
4. (Currently Amended) The lubricant composition of claim 1 containing ~~about 3% to about 5% by weight of said fluorine-containing passivating~~ organic compound.

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5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Original) The lubricant composition of claim 1 sheared in a high speed mixing operation prior to use in the manufacture of aluminum alloys.

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

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17. (Currently Amended) ~~An oxidation-inhibiting~~ The lubricant composition of Claim 1 ~~for use in the casting of aluminum alloys containing casting wherein the~~ lubricant oil base is selected from the group consisting of glycerol trioleate, ethyl oleate, methyl oleate, butyl ricinoleate, methyl acetyl ricinoleate, butyl oleate, glycerol triacetyl rincinolate, butyl acctyl rincinolate, castor oil, peanut oil, corn oil, canola oil, cotton seed oil, olive oil, rapseed oil, safflower oil, sesame oil, sunflower oil, soybean oil, linseed oil, coconut oil, palm kernel oil, neatsfoot oil, and combinations thereof, ~~the improvement wherein said lubricant composition further contains: an effective amount of an organic fluorine containing passivating compound.~~

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

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25. (Currently Amended) ~~An oxidation-inhibiting~~ The lubricant composition of Claim 1 ~~for use in the casting of aluminum alloys containing an existing casting wherein the~~ lubricant oil base is selected from the group consisting of glycerol triolate, castor oil, and combinations thereof, ~~the improvement wherein said lubricant composition further contains an effective amount of an organic fluorine containing passivating compound.~~

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Canceled)

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34. (Canceled)

35. (Canceled)

36. (Withdrawn) A process for the continuous casting of aluminum alloys wherein molten aluminum alloy is cast into a cooled mold having a lubricated inner mold wall, said process comprising the steps of:

a) lubricating an inner wall of a cooled, continuous casting mold with an oxidation inhibiting lubricant composition comprising:

i) a casting lubricant base selected from the group consisting of glycerol trioleate, ethyl oleate, methyl oleate, butyl ricinoleate, methyl acetyl ricinoleate, butyl oleate, glycerol triacetyl ricinoleate, butyl acetyl ricinoleate, polyalphaolefins, poly isobutylenes, castor oil, peanut oil, corn oil, canola oil, cotton seed oil, olive oil, rapeseed oil, safflower oil, sesame oil, sunflower oil, soybean oil, linseed oil, coconut oil, palm kernel oil, neatsfoot oil, and combinations thereof, and;

ii) an effective amount of a fluorine-containing passivating compound.

b) casting a molten aluminum alloy into said mold, whereby said oxidation inhibiting lubricant reduces the oxidation of said molten aluminum base alloy at the meniscus of said lubricated inner mold wall and said molten aluminum base alloy.

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37. (Withdrawn) The oxidation inhibiting lubricant composition of claim 36 comprising about 0.1% to about 10% by weight of said fluorine containing passivating compound.

38. (Withdrawn) The oxidation inhibiting lubricant composition of claim 36 comprising about 1% to about 8% by weight of said fluorine containing passivating compound.

39. (Withdrawn) The oxidation inhibiting lubricant composition of claim 36 comprising about 3% to about 5% by weight of said fluorine containing passivating compound.

40. (Withdrawn) The oxidation inhibiting lubricant composition of claim 36 wherein said passivating compound comprises an inorganic fluorine-containing compound.

41. (Withdrawn) The oxidation inhibiting lubricant composition of claim 36 wherein said passivating compound comprises an organic fluorine-containing compound.

42. (Withdrawn) The oxidation inhibiting lubricant composition of claim 36 wherein said fluorine-containing passivating compound is selected from the

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group consisting of: ammonium hexafluozirconate, fluorinated carbon, sodium bifluoride, potassium bifluoride, magnesium fluoride, aluminum fluoride, sodium fluoride, calcium fluoride, sodium hexafluosilicate, sodium hexafluorophosphate, potassium zirconium fluoride, sodium fluoborate, tetradecefluorohexane, cryolite, polyhexafluoropropylene oxide, fluorinated ethylene propylene copolymer, perfluoroalkoxy polymers, poly(ethylene-co-tetrafluoroethylene), and polytetrafluoroethylene.

43. (Withdrawn) The lubricant of claim 36 sheared in a high speed mixing operation prior to use in the casting of aluminum alloys.